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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,924	05/19/2004	Ruolin Li	ITL.1077US (P18308)	5824
21906	7590	09/07/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			PALMER, PHAN T H	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/848,924

Applicant(s)

LI ET AL.

Examiner

PHAN T.H. PALMER

Art Unit

2874

*[Handwritten signature]*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Phan T.H. Palmer*  
PHAN T. H. PALMER  
PRIMARY EXAMINER  
09/02/05

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's cooperation is requested in correcting any error of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Komiya et al (US 2005/0117831 A1).

The Komiya et al discloses in figure 10, **a method comprising:**

- forming a trench or groove (3) through cladded waveguide (2n);
- partially filling said trench (3) with a filler material (51); and
- forming a thin film filter (4) aligned with said waveguide on said filler material.

With regard to claim 1, the Komiya et al discloses all the claimed invention.

With regard to claim 2, the method including partially filling said trench (3) with a material whose index of refraction is close to that of cladding on said waveguide, is disclosed in the Komiya et al reference.

With regard to claim 3, the method including detecting light of a first wavelength reflected by said thin film filter, is disclosed in the Komiya et al reference.

With regard to claims 4-7, all the limitations are disclosed in the Komiya et al reference.

The Komiya et al discloses in figure 10, an **optical demultiplexer comprising:**

- a semiconductor substrate (10);
- a waveguide core (2n) over said substrate (10);
- a thin film filter (4) to reflect light of at least one wavelength and to pass light of at least one other wavelength arranged in alignment with said waveguide core; and
- a reflective surface aligned with said thin film filter and said waveguide core to reflect light of a wavelength passed by said thin film filter.
- a photodetector (66n) arranged to detect light reflected by said thin film filter, and detect light reflected by said reflective surface.
- said waveguide (2n) including upper cladding (21) and lower cladding (22) on said core (20) and a trench or groove (3) through said

cladding defining said reflective surface, said trench filled with a filler material (51) whose index of refraction matches that of said cladding, and thin film filter (4) formed on said filler material.

With regard to claims 8-11, the Komiya et al discloses all the claimed invention.

Claims 12-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ding et al. (US2004/0223682 A1).

The Ding et al reference discloses in figures 1-3, a method comprising:

- forming a slot or groove (16) between a pair of waveguide core in a planar light circuit; and
- inserting a thin film filter (18a) between said waveguide cores.

With regard to claims 12-31, the Ding et al reference discloses all the claimed invention.

### **CONTACT INFORMATION**

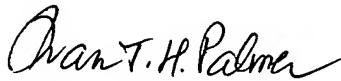
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHAN T.H. PALMER whose telephone number is (571) 272-2354. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RODNEY B. BOVERNICK can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**PTHP**  
**09/02/2005**

  
**PHAN T. H. PALMER**  
**PRIMARY EXAMINER**